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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,684	04/30/2001	Masato Takahashi	206379US2PCT	9633
22850	7590	11/12/2003	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			KIM, PETER D	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 11/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/830,684	TAKAHASHI, MASATO	
	Examiner	Art Unit	
	Peter B. Kim	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28,29 and 31-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28,29,35 and 42-63 is/are rejected.
- 7) ☒ Claim(s) 31-34 and 36-41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's arguments filed on Aug. 25, 2003 have been fully considered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 46-52 and 55-63 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 46 and 58, applicant states that a counter stage refers to the stators 212A and 212B (arguments filed Aug. 25, 2003). Claims 46 and 58 recite that the counter stage is coupled to the second member of the driver. As far as the examiner can ascertain, the second member is the stator. Thus, the stator seems to be both the counter stage and the second member of the driver, and it is not clear how the stator is claimed as two separate structures.

The remaining claims, not specifically mentioned, are rejected for incorporating the defects from the base claim by dependency.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 28, 29, 35, 42-54, and 57-63 are rejected under 35 U.S.C. 102(e) as being anticipated by Hazelton et al. (Hazelton) (6,252,234).

Hazelton discloses an exposure apparatus with a stage unit comprising a sample stage (26) that holds a sample (12), a stage driving mechanism (30), a first transmitting member (62) to which at least one part of the stage driving mechanism is connected and a reaction force caused by driving the sample stage is transmitted and a first damping member on the first transmitting member arranged at a position where a maximum strain of the first transmitting member is caused (col. 4, lines 19-30, the ground is the damping means located where the strain on the transmitting member is at a maximum). Hazelton discloses the stage driving mechanism comprising a stator arranged on the first transmitting member and a mover that is driven together with the sample stage by electro-magnetic interaction between the stator and the mover (Fig. 2, col. 3, line 54 – col. 4, line 49). Hazelton discloses a stage base (58) that movably supports the sample stage and is supported independently of the first transmitting member. Hazelton discloses a projection optical system (24) between the mask and the substrate, and a holder (42) that is independent of the first transmitting member and holds the projection optical system. Hazelton discloses a controller (22) that synchronously moves the mask and the substrate.

Hazelton discloses an exposure apparatus comprising a driver having a first member (56) couple to the stage (26) and having a second member (50) configured to drive the stage, a stage base (58) that movably supports the stage, a counter stage that moves in a direction opposite to the stage (col. 4, lines 32-49), a first supporting frame (62) that is arranged independently of the stage base and movably supports the counter stage and a damping member that is arranged on the first supporting frame and damps a vibration of the first supporting frame wherein the damping

member is arranged at a position where a maximum strain of the first supporting frame is caused (col. 4, lines 19-30, the ground is the damping means located where the strain on the transmitting member is at a maximum). Hazelton discloses a projection optical system (24) and a second supporting frame (42) arranged independently of the first supporting frame and supporting the projection optical system.

Allowable Subject Matter

Claims 31-34 and 36-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the prior art of record teaches or discloses the first damping member is a piezo-electric element or an electro-mechanical transducer in combination with a stage unit comprising a sample stage, a stage driving mechanism, a first transmitting member to which a reaction force caused by driving the sample stage is transmitted and the first damping member that is arranged on the first transmitting member where a maximum strain of the first transmitting member is caused.

Response to Arguments

Applicant's arguments with respect to claims 28, 29, and 31-63 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Kim whose telephone number is (703) 305-0105. The

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examiner can normally be reached on Monday-Thursday from 8:30 AM to 6:00 PM. The examiner can also be reached on alternate Fridays during the same hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703 308 2847. The fax phone numbers for the organization where this application or proceeding is assigned is 703 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 306- 3431.

A handwritten signature in black ink, appearing to read 'Peter B. Kim', with a stylized flourish at the end.

Peter B. Kim
Patent Examiner
October 31, 2003